



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

there is not known a single authentic case of the inheritance of acquired characters. The pamphlet contains in general the ideas noted above.

Die Thaten der Vererbung. ROTH. Berlin, 1885.

We have no opportunity to review the older theories of heredity, and simply refer those desiring abstracts of the more important to the above. The author intersperses critical notices of his own.

Ueber die Dauer des Lebens. WEISMANN. Jena, 1882.

A curious but interesting discussion has arisen between Weismann and Götze concerning the relation of reproductive and somatic cells to the length of life and the causes of death. The former calls attention to the fact that protozoa are essentially immortal. We have a continuous growth of protoplasm, and the multiplication of individuals is due to continuous self-division. Of course myriads of individuals are continuously destroyed, but this is not due to any inner principle of senescence, but to other accidents. In metazoa, however, we have, besides "catastrophic death," a "natural death," which is not original, but has been acquired for the good of the species. Natural selection has fixed the length of life for each species at just those limits that admit of the fullest amount of reproductive activity needed to maintain the species. Slow breeders are longest lived; this law is correlated with a second law that the fecundity of the species or the number of eggs or young produced is dependent in direct ratio upon the liability to their destruction before maturity is attained. Protozoa became metazoa by the products of division remaining in contact to form a colony or mass of cells, among which differentiation of labor was instituted and a certain proportion of the cells were modified to serve the reproductive cells. It was clearly of no use for any but reproductive cells to remain immortal, and hence the power to divide so as to pass less and less germinal plasma into the somatic cells was advantageous and was preserved by natural selection. Weismann also thinks that the somatic cells were impressed with power of limited production, those in long lived individuals having the power to produce a greater number of generations than in the short lived. This appears as a weak point in the theory, for it would be difficult to prove that what is called natural death is not in all cases due to inner catastrophic causes, usually the failure in proper functioning of some vital organ. The fact that tissues can indefinitely regenerate themselves shows that their cells, if they receive proper conditions of nutrition, are practically immortal.

Ueber den Ursprung des Todes. GÖTTE. Leipzig, 1883.

Weismann's paper called forth this by Götze. His thesis is, that death is in all cases fundamental, that protozoa even have to die. The organization of the protoplasm breaks up and is reconstituted in the process known as *rejuvenescence*, in which the unicellular being, after having secreted a case or cyst about itself, lies dormant for a time as if in sleep. In the formation of a colony the cells may be alike (*homoplastic*) or unlike (*heteroplastic*). The metazoa all belong to the latter group. In the first group reproduction of the body-colony is accompanied by the dissolution of the units, each of which continues its life, and by self-division produces a new colony-individual. But the parent individual has ceased to exist. Is this to be termed death? If so, where is the corpse? The dissolution is to be considered as dependent on the fact that each of the cells undergoes *rejuvenescence*, that they may recontinue to divide, and in so doing produce the new individuals. Among the heteroplasts only the reproductive cells have the chance to form new individuals, but the colony, as in the lowest metazoa, (*mezozoa*=*orthonectida*, etc.,) breaks up during reproduction, and the few somatic cells